

AMENDMENTS TO THE CLAIMS

1-3. (Withdrawn)

4. (Currently Amended) In a system for providing communication services between geographically dispersed source and destination terminals, an apparatus comprising:

at least one airborne or spaceborne and movable wireless communications device, wherein the wireless communications device is configured to store and forward large data files of at least an aggregated 10 gigabytes, and includes:

a wireless transceiver for communicating with the source and destination terminals over at least one high bandwidth channel,

mass data storage configured to store the large data files for a predetermined period of time, wherein the predetermined period of time is greater than two minutes, and

at least one processor coupled among the wireless transceiver and the mass data storage;

wherein the processor, via the wireless transceiver, is configured to

control receipt of at least one large data file, from the source terminal, for storage in the mass data storage, and

after the airborne or spaceborne wireless communications device travels near to the destination terminal, control transmit of the large data file to the destination terminal; and

wherein the processor is configured to:

receive at a first time a control signal from a terrestrial station,

wherein the control signal schedules a time and provides an

originating geographic location to receive the large data file,

wherein the originating geographic location is associated with the source terminal,

receive, at a second time and from the source terminal, the large data file when the airborne or spacebourne wireless communications device travels to the originating geographic location, wherein the second time is after the first time, and transmit at a third time the large data file to the destination terminal, wherein the third time is at least two minutes after the second time, and wherein the destination terminal is geographically remote from the originating geographic location.

5. (Original) The apparatus of claim 4 wherein the wireless communications device is a satellite, and the communication system employs a constellation of multiple orbiting satellites.

6. (Original) The apparatus of claim 4 wherein the wireless communications device is a satellite in a non-geostationary orbit.

7. (Original) The apparatus of claim 4 wherein the wireless transceiver employs radio frequency (RF) or optical communication techniques.

8. (Original) The apparatus of claim 4, further comprising a low bandwidth transceiver coupled with the processor for communicating over a low bandwidth channel, and wherein the processor is further configured to:

receive scheduling commands from a land- or sea-based mission control facility over the low bandwidth channel; and

schedule at least transmission of the large data files based on the scheduling commands.

9. (Original) The apparatus of claim 4 wherein the high bandwidth channel includes one or more channels that in aggregate have at least a 200 Mb/s bandwidth.

10. (Original) The apparatus of claim 4 wherein the processor is further configured to transmit the large data file to, or receive the large data file from, another airborne or spaceborne and movable wireless communications device.

11. (Original) The apparatus of claim 4 wherein the processor is further configured to:

autonomously receive a request to accept a new large data file from a new terminal, and

receive the new large data file if the processor autonomously determines that the new large data file may be stored in the mass data storage and be safely transmitted to another terminal.

12. (Original) The apparatus of claim 4 wherein the processor is configured to facilitate processing of the large data file via transparent relay mode communication.

13. (Original) The apparatus of claim 4 wherein the wireless transceiver operates via optical or radio frequency transmissions.

14-41. (Withdrawn)

42. (Currently Amended) A computer data ~~signal embodied in a carrier wavesystem~~, the computer data ~~signalsystem~~ comprising:

a terrestrial server computer at a terrestrial destination location and configured to receive a data signal, wherein the data signal representingrepresents at least a portion of a large data file, wherein the large data file is of at least an aggregated 10 gigabytes,

wherein the data signal is ~~at least based on a signal transmitted by a airborne or spaceborne and movable wireless communications device configured to~~ (a) wirelessly receive, over at least one high bandwidth communications channel, the large data file from a land- or sea-based source terminal at an originating geographic location, (b) store the large data file for a predetermined period of time greater than two minutes, and (c) transmit the signal and the large data file after the airborne or spaceborne wireless communications device travels from the land- or sea-based source to a the terrestrial destination terminal location; and

wherein the data signal ~~or the transmitted signal~~ includes coding for error correction of the large data file;

wherein the airborne or spaceborne and movable wireless communications device -- (a) receives at a first time a control signal scheduling a time and providing the originating geographic location to receive the large data file, (b) receives at a second time the large data file when the airborne or spacebourne wireless communications device travels to the originating geographic location, wherein the second time is after the first time, and (c) transmits at a third time the large data file to the terrestrial server computer at the destination location;

wherein the third time is at least two minutes after the second time, and

wherein the destination location is geographically remote from the originating geographic location.

43. Canceled.

44. (Currently Amended) The computer system data ~~signal~~ of claim 42 wherein the large data file is divided into smaller groups of data, and wherein the coding or the dividing is adjusted based on a quality of the high bandwidth communications channel.

45. (Currently Amended) The computer system data ~~signal~~ of claim 42 wherein the data signal includes fill blocks instead of portions of the large data file when the high bandwidth communications channel is unacceptable.

46. (Currently Amended) The computer system data ~~signal~~ of claim 42 wherein the large data file is block coded.

47. (Currently Amended) The computer system data ~~signal~~ of claim 42 wherein the coding includes forward error correcting the large data file.

48. (Currently Amended) The computer system data ~~signal~~ of claim 42 wherein coding includes encrypting the large data file.

49. (Currently Amended) An ~~information-bearing signal~~ apparatus for use by ~~with~~ an airborne or spaceborne and movable wireless communications device, the ~~information-bearing signal~~ apparatus comprising:

a terrestrial-based server computer configured to provide control signals to the airborne or spaceborne and movable wireless communications device, wherein the control signals instruct the airborne or spaceborne and movable wireless communications device to direct an antenna of the airborne or spaceborne and movable wireless communications device to receive data from a land- or sea-based source terminal, wherein the data represents at least a portion of a large data file, wherein the large data file is of at least a combined 10 gigabytes;

~~wherein the information-bearing signal is at least based on a signal transmitted by the airborne or spaceborne and movable wireless communications device;~~

wherein the airborne or spaceborne and movable wireless communications device is configured to wirelessly receive, over at least one high

bandwidth communications channel, the large data file from a land- or sea-based source terminal, and to store the large data file for a predetermined period of time greater than two minutes, and
wherein the terrestrial-based server computer is further configured to provide control signals to direct the antenna of the airborne or spaceborne and movable wireless communications device to transmit the signal and the large data file after the airborne or spaceborne wireless communications device travels from the land- or sea-based source terminal to a terrestrial destination terminal, wherein the terrestrial destination terminal is geographically remote from the land- or sea-based source terminal
wherein the airborne or spaceborne and movable wireless communications device transmit the large data file after at least two minutes have passed since the airborne or spaceborne and movable wireless communications device received the large data file;
wherein the high bandwidth channel includes one or more channels that in aggregate have at least a 200 Mb/s bandwidth; and
wherein the information bearing signal, or the signal transmitted by the airborne or spaceborne and movable wireless communications device, includes coding for error correction of the large data file.

50. (Currently Amended) The information-bearing signal apparatus of claim 49 wherein the large data file is block coded, and wherein the coding includes forward error correcting the large data file.